

A
D I C T I O N A R Y
OF THE ORNAMENTAL
TREES, SHRUBS, and PLANTS,

MOST COMMONLY CULTIVATED

In the PLANTATIONS, GARDENS, and
STOVES, of GREAT-BRITAIN;

Arranged according to their

LINNÆAN GENERIC NAMES,

AND CONTAINING

Full and accurate Descriptions of the different

GENERA and SPECIES,

WITH THE

GENERIC and SPECIFIC NAMES PROPERLY
ACCENTED.

AT THE END,

Is a copious INDEX of GARDENERS and VULGAR NAMES, refer-
ring to their TRUE TITLES in the DICTIONARY, and the Dic-
tionary to a prefixed COMPENDIUM of the SEXUAL SYSTEM,

RETAINING

All the Circumstances necessary to a competent Knowledge
of the SCIENCE of BOTANY,

And in which

EVERY GENUS CONTAINED IN THE DICTIONARY IS PLACED
UNDER ITS PROPER CLASS AND ORDER, WITH ITS CON-
TRACTED CHARACTER.

CHIEFLY INTENDED

For the Use of the LADIES, but proper for all who wish to amuse them-
selves with the Study of PLANTS, and to pronounce their Names with
Propriety.

By CHARLES BRYANT.

N O R W I C H :

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P R E F A C E.

IN a rich and flourishing country, like that of Great-Britain, there are numerous individuals whom fortune has rendered quite independent of any particular calling or occupation. To many of these, time proves often tedious, and diverse recreations and amusements are sought to make the vacant hours glide agreeably; for the faculties of the mind, like the members of the body, lose their strength and vigour, if not duly recruited with proper nourishment; and intervals of anxiety will intrude, to the great detriment of the animal spirits. Recreations, then, of some sort, are absolutely necessary for the better enjoyment of health and happiness, but our partiality ought to be directed to such as cannot only entertain the mind, but improve the heart and understanding. It may be observed, however, that those now most generally followed have but little tendency to these points; nor can they, from their nature and short duration, produce that uniform temper of mind necessary to true happiness. On the contrary, when too closely pursued, they seldom fail to impair both health and morals. He then who can suggest an amusement more permanent in its nature, more harmless and innocent in its effects, and at the same time supply the means of putting it in practice, certainly ought to claim the esteem of mankind, as much as he who has invented the most agreeable *Game*, or supplied the Stage with the most captivating *Drama*.

Taste of every kind is more commonly fixed by chance, or recommendation, than by nature. The general imitation of fashions abundantly proves this; and the same may be observed of the Arts and Sciences, numbers having been known to take to a particular branch, only by an accidental connection with, or a recommendation from persons, who study that branch. A true natural genius, indeed, will

soonest arrive at perfection in any pursuit; but the less expert, when once they get over the beginning difficulties, will not fail, by a steady and proper application, to make an improvement answerable to their wishes. And without such an application, our progress must be slow in any undertaking. Having dropped these few hints, I must now beg the Ladies attention to the Study of Botany; as in this study they will find constant amusement of the most harmless and salubrious kind, and they will draw from it a large addition of new and useful ideas.

There is always a peculiar satisfaction resulting from the contemplation of any part of Nature, and none of her works can afford more agreeable sensations, than those which compose the *Vegetable Kingdom*. The aspect of Plants is generally pleasing, and their properties are almost boundless. They not only furnish most of the necessaries and luxuries of life, but the eye, the nose, and the palate are not unfrequently gratified by the same individual. The same cannot be said of any of the other tribes of creation. Let one walk a garden or plantation, when the Trees, Shrubs, and Plants are in bloom, and vying with each other in displaying their beauties; can he avoid being filled with rapture? What artificial scene can be equally enchanting? All around portray the Deity! and the grandeur of their foliage, the elegant forms and inimitable tints of their flowers, with the fragrance of their perfumes, conspire to sooth the mind and melt the soul in ecstasy. Can you leave such charmers without reluctance? But can they yield only sensual delights? Shall the majestic *Oak* and towering *Pine* extend their leafy branches, only to shade and screen you from the Sun? Shall the thorny *Rose* and pliant *Woodbine* exhale their grateful odours, only to regale the sense of smelling? Or, shall the gaudy *Tulip* and proud *Ranunculus* unfold their various dyes, only to please the eye, and be no farther regarded? The Florist and Epicure may thus be fully gratified, but not the philosopher. His penetrating eye will discover numerous pleasing and interesting circumstances, entirely unknown to either of the former. The different methods of the propagation of plants, their astonishing increase, their various manners of unfolding, the nice and exact conformity of their several parts, and the analogy of these to those of animals: their peculiar motion, their sleep, the limits of their tribes, their sex, the marks of the species, the very small gradations by which they arise, or recede from each other, and abundance of other particulars, will attract his notice, and fill him with the most exalted admiration of the great Creator.

As to the Florist, it must be confessed he has been in some measure useful, having abundantly pointed out how Nature may be varied by change of soil, nurture, and promiscuous mixtures. Some of his varieties too, when properly disposed, (not in formal beds and frames) are some of the best ornaments of a garden. But, nevertheless, I will not scruple to tell him that he has already proceeded too far, as shall be presently shown; that most of his distinctions are merely fanciful; that after all his pains he is still ignorant of the true characters of plants, and that the more he extends his practice, the more he mars the beautiful and regular order of Nature, by blotting out its individual distinctions.

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|---|-------|
| The varieties (as they are called) which have been raised | |
| of the <i>Primula Auricula</i> are above | 300 |
| of the <i>Hyacinthus Orientalis</i> above | 500 |
| of the <i>Tulipa Gesneriana</i> above | 600 |
| of the <i>Ranunculus Asiaticus</i> above | 1,100 |

In the whole above

2,500

Astonishing! the number is too large for their differences to be real, or any way permanent. But, supposing any *connoisseur* in flowers should be capable of distinguishing these two thousand five hundred varieties by their particular names, it is evident he would thus be acquainted with only four distinct species, out of about ten thousand already described in the *Systema Vegetabilium*; and, which it is probable, does not contain above one fourth part of the number scattered over the whole face of the Globe. A share so trifling, then, as that just mentioned, scarcely deserves notice, much less any pains to acquire. The practice, however, of the Florist is amusing, and it strongly indicates his natural attachment to the beauties of Vegetation. Perhaps his confined tract is more his misfortune than his fault. Were he furnished with a proper pilot, he might venture in the main ocean, and cull from every quarter. We may, however, justly remark, that with less pains and expence than is frequently bestowed on these kinds of flowers, a vast variety of species might be introduced into gardens, not inferior to the former in beauty, but far surpassing the generality of them in utility.

In regard to the Ladies, for whose amusement the present Work is chiefly designed, a fondness for plants seems to be blended in their very natures. How anxiously do they enquire after the name and properties of almost every plant that comes in their way! How diligently do they tend their *Myrtles*, *Balsams*, and *Geraniums*, that they may the longer enjoy the freshness of their green, and the beauty

of their flowers! Yet, where are the Ladies who have made any great progress in the scientific knowledge of plants? They certainly are as capable as the opposite Sex. But which are the books proper for teaching them? Not the *works* of *Linnaeus*; for, besides their being in a dead language, they are too concise and technical to be easily comprehended. Nor can the laboured *Dictionary* of *Miller* answer this end, it being too prolix and general. Several Floras, indeed, have appeared in English; but what great benefit can the Fair Sex derive from these? They describe the wild plants, and it cannot be expected that females should range hills, dales, groves, woods, bogs, and meadows, in search of specimens for examination. With so many obstacles then in the way, it is no wonder they have generally neglected the study of Botany. But let the Rudiments of the Science be drawn into a narrow compass; expunge as much as possible the hardest and most difficult terms, and fix on such materials as are the most engaging and easy to be procured, and at the same time proper for the illustration of all the principal parts of the Science, and then, I doubt not, but that the Ladies will be able to keep pace, as far as such guide may lead them, with the Gentlemen. A scheme of this sort is aimed at in the following sheets, which contain such plants in general as have an immediate power to please, and for the most part are those which complete the grandeur and elegance of pleasure gardens and plantations, and consequently can be come at and examined in the hours of recreation in these places; or, if not, they are such as may be found very near them.

To render the attainment of the Science the more easy, I have given two different methods of arrangement. Besides forming a *Compendium* of the sexual system, and placing therein a select number of genera, I have composed a *Dictionary* of those same genera, and have there described them all at length; the *Compendium* exhibiting only their contracted characters. This *Dictionary* is succeeded by a copious Index of Gardeners and Vulgar names, by which any plant in the Book, and the Class and Order it belongs to in the System, may be readily known; the Index referring to its true botanick name in the *Dictionary*; and the *Dictionary* to the page where it may be found in the *Compendium*. The advantage of this double arrangement must be obvious to every one; the *Dictionary* will be found the most convenient when only the name of a genus, and description of a species are sought; and the *Compendium* the most ready for teaching the Rules of the Science, and the examining such genera as are nearly related. The *Dictionary*

ary too will greatly facilitate the acquiring the Rules; for, by frequently turning to the Compendium to find the Class and Order a plant belongs to, the memory will be as many times refreshed, as occasions occur of referring to the pages; the explanation of the class and order sought, being every time under the eye. Thus the learner will be almost insensibly drawn into a scientific method of practice, without previous study, the fatigue of which has prevented many from pursuing their inclination.

When the distinctions of the Classes and Orders have thus been tolerably well imprinted on the memory, there will be little difficulty in making out a plant by rule, the genera inserted in the Compendium being but few, compared to the number described by *Linnaeus*. Suppose a person should have made progress sufficient to tell on looking in a flower, that it belongs to the fourth class, and the first order of that class, the genera of this order not exceeding ten, they are soon read over either here or in the Dictionary, and the plant in question ascertained; provided care be taken to observe well the generic distinctions, otherwise mistakes will happen in spite of any method, or the most accurate descriptions; the genera being the last and only guides to the species. It will be necessary, then, for the young Botanist minutely to examine all the component parts of a flower, before he fixes on any genus.

In the descriptions I have studiously avoided the most difficult terms, and have only retained a few words, (which are explained hereafter) the absence of which could not have been dispensed with, but by rendering the language highly barbarous, and stripping the Science of its principal ornaments. It is the business of Science to teach expression with knowledge, and to effect this every one must have its peculiar terms.

In forming the Compendium I have entirely rejected the *Polygamia*, or twenty-third class, and have transferred the genera belonging to this, to the twenty-first and twenty-second, by adding an order to each of the latter. There is certainly as much propriety in arranging them thus, as in *Linnaeus's* forming the order *Monogamia* in the nineteenth class, which puts simple flowers in the same class with the compound, only from the circumstance of the summits in these flowers being five, and united.

Many plants in a state of Cultivation do not retain all the characteristic marks of their wild state. The flower in some is very subject to vary in the number and colour of its petals, as is well known to the Florist. On the other hand, cultivate some species as long as you please, and the colour and number will be always the same, though the plant may alter

in some other particulars, and then colour becomes a good specific mark. The calyx is the most immutable part of a flower, yet in gardens its number of leaves or segments will often differ, as may be seen in the *Hollyhock*. The number of stamina and styles will be increased in some; this happens to several species of *Sedum* and *Sempervivum*. The leaves of plants are excessively mutable, and from serrated will become jagged, as is the case in the common *Elder*. In several fruit trees the entire leaf will become serrated, and the serrated entire; the naked hairy, and the hairy naked; owing to the different soils or situations they stand in. By redundancy of nourishment the stems will alter; the round will become flat, which often happens in the *Crown Imperial*. The compressed will change to angled, as is seen in some species of *Narcissus*, when they produce double flowers; and the square will vary to six-angled, as has been found in *Epilobium Tetragonum*. Even the duration of plants will be affected by culture; some that are annuals when wild, frequently become biennial in a garden; and biennials often live through the third or fourth year, as the *Hollyhock*. Nay, some of these kind of plants may be constantly kept up by slipings, instances of which I have seen in *Viola Tricolor*, yet this is deemed only annual when wild. It is probable, however, that a plant never loses all its natural characters; for though the *Viola* is thus rendered in a manner perennial, and otherwise somewhat altered, still the stigma will perfectly retain its natural form, and the stigma is a main mark of the species; in this 'tis pitcher-shaped, but in the *Odorata*, and some others, it is hooked.

Those called *Hybrid*, or mule plants, will exhibit imperfect marks of both the plants they spring from; and, contrary to animal mules, will propagate their likeness by seed, as is well known by the *Calendula Hybrida*, *Pluvialis*, and some others. I just mention this, as it has often been asserted that mule plants will not. But the sole aim of botany is to teach how to distinguish the different species by certain marks peculiar to each; and sometimes one single character is sufficient for this purpose, as is the case in *Cytisus Sessilifolius*, a plant very subject to vary in its leaves, and yet it may be always known from the other species of the genus, only by the simple circumstance of its flower having three bractæ at the base of its calyx. Plenitude in flowers causes the greatest embarrassment, for by the multiplication of the petals, the more essential parts of the flower, which are often specific marks, are mutilated, if not totally destroyed; but a close attention to all other circumstances will often overcome the difficulty. The species once settled, the flower being double instead of single,

white instead of blue, or the plant otherwise altered, is immaterial to the true Botanist; having ascertained the species, he has gained his end, and he is now enabled to communicate to others, whatever useful or curious observations he may afterwards make on the Plant.

When it be considered that soil, situation, and management have such various effects on plants, as has been observed, it must not be expected that the following descriptions of the Genera and Species will, in every instance, correspond with those of *Linnaeus*; his being mostly formed from plants in a state of nature; these from their general appearance under cultivation. From this, and other circumstances, I have been often under the necessity of totally disregarding *Linnaeus**, except as to method, and that I have frequently varied, especially in the Genera of the *Syngenesia*, which I have rendered much more simple. It is necessary to take notice, too, that in such Genera as contain many species, it seldom happens they all agree in every descriptive character of the Genus, even in their wild state. For instance, in *Campanula* the Corolla, Stigma, and Seed-vessel differ very much. *Linnaeus* has mostly noticed such variations at the bottom of his generic descriptions; but here, when they could be conveniently included, they make part of the general description. As my chief aim in the work has been to furnish proper, yet a variety of materials for teaching the System, I have described some plants that are not cultivated; but they are natives of England, very common, and consequently easy to be procured.

A certain and proper mode of pronouncing the generic and specific Names is surely worth attending to, for it is not uncommon to hear different persons pronounce these words so very different, as hardly to know whether they mean the same. To obviate this, I have all through the Book, marked the emphatical syllable of all these words of more than two syllables. It may be said, this has partly been done in the *Litchfield Translation* of Murray's *Systema Vegetabilium*. Very true; but the plan of this Work, exactly as expressed in the *Title Page*, was laid in the year 1782, long before the *Litchfield Translation* appeared, though the Author could not get time from common business to complete it till lately. As to the words just mentioned, the derivation of all employed here, has been carefully sought out, by the assistance of a Friend, a very eminent Latin and Greek scholar, and it may be presumed they are pretty correctly marked. Some objection, may be made to the uncouth sound of those compounded of *ides* and *flora*, such as *fico-ides*, *grandi-*

B

* For an example of this, see the Genus *Cerinth* in the Dictionary.

flóra, &c; for the accent of these words falling on the penult, certainly renders their pronounciation much more unpleasant to an English ear, than it would be if the words were marked thus; *ficóí-des*, *grandif-lóra*. But the *i* being long in *ides*, and the *o* in *flóra*, we could not with propriety mark them otherwise.

It remains now only to inform the Reader, that such Plants as are deemed annual and biennial, are pointed out by these marks: ☉, or Sol, for annual; and ♂, or Mars, for biennial; the rest of course will be known to be perennial. As to their time of flowering, I have not marked it, but when useful for distinguishing the species. With the same view, those belonging to the Green-house and Stove are noticed. The country where they spontaneously grow is mentioned immediately after their English name.

TERMS EXPLAINED.

OF FLOWERS AND THEIR CONSTITUENT PARTS.

N. B. When the Learner would study the following descriptions of flowers and their parts, he should have before him several perfect single flowers of different kinds, which will prove of more use to him than the best Copper Plates, as the real objects will always be found to exceed the best representations.

Calyx, the leaves or cup furrounding the bottom of a Flower; as the green leaves of a *Rose-bud*.

Corólla, the leaves of a Flower. The red leaves of a *Rose* form the *Corolla*.

Petal, a leaf of the *Corolla*. The red leaves of the *Rose* are petals.

Limb. When the upper part of a petal is broader than the lower, the broad part is called the limb; as in the *Hope*.

Germen, the Seed bud. This is either within the Flower, or immediately under it, and contains the rudiments of the seed.

Style, a little pillar standing on the top of the *Germen*; as that in the center of a *Lily*.

Stigma, the top of the *Style*; as the triangular knob on the top of the *Style* of the *Lily*.

Stámina, the threads within a flower; as the long threads furrounding the *Style* of the *Lily*.

Summits, the little oblong bodies on the tops of the

Stamina of the *Lily* are the Summits, or *Anthææ* of *Linnaeus*, and contain the Pollen or male dust.

Nectarium; this is a part of a flower seemingly designed by nature for the secretion of the honey, and in different Flowers it differs greatly in figure. In *Narcissus* it resembles a cup; in *Aquilegia* a horn; in *Helleborus* it is scoop-shaped.

A *Male Flower*; this contains only Stamina, or in their absence, only Summits.

A *Female Flower*; this contains only Styles, or in their absence, only Stigmas.

A *Neuter Flower*; this contains neither Summits, nor Stigmas.

An *Hermaphrodite Flower*; this contains both Stamina and Styles.

A *Pedunculated Flower*; this is supported on a footstalk, which footstalk is a *peduncle*.

A *Sessile Flower*; this has no footstalk or peduncle, but stands close to some part of the Plant.

A *Compound Flower* *; this is made up of many sessile Florets, or small *Flowers* of one petal each, having no individual Calyces, but are all included in one common Calyx, and stand on one common, undivided Receptacle. Both the *Male* and *Hermaphrodite* Florets have always five Stamina, with their Summits united in a kind of cylinder, through which passes a thread shaped Style; and the Florets produce only one seed each; as in *Starwort*.

An *Aggregate Flower*; this has a spreading Receptacle, collecting many Florets into one head, and each Floret has its own proper Calyx, and its summits are detached; as in *Seabious*.

A *Butterfly Flower*; this is for the most part composed of four petals, so disposed as somewhat to resemble a Butterfly. The upper Petal is termed the

* The middle of a compound Flower is termed the Disk, and the part the

Standard, the side ones the *Wings*, and the lower one the *Keel*; as in the *Pea Bloom*. *The Stamina and Style in these Flowers take the same curvature as the Keel*.

A *Lipped Flower*; this consists of one irregular Petal, which is whole downward, but divided near the top into two parts or lips, and is exemplified in the *White Nettle*.

An *Involúcrum*, is a kind of common Calyx, fixed at the base of most Umbels of Flowers; as in the *Geraniums*. Many simple Flowers too have an *Involucrum*; as the *Anemonies*.

A *Bráctea*, is a small leaf standing on the peduncle of a Flower, and differs in size, shape, and mostly in colour from the leaves of the Plant; as in the *Lime Tree*.

A *Spike*; this is formed by many sessile Flowers standing on all sides of a Common Peduncle; as in the *Lavender*.

A *Racémus*; this is formed by many pedunculated Flowers standing on all sides a Common Peduncle; as in the *Currant*.

A *Catkin*; this is a sort of Compound Calyx, consisting of many scales, ranged along a Common Peduncle, or Receptacle; as in the *Willow*.

A *Spadix*; this is a kind of Common Peduncle protruded from a Sheath; as in the *Arum*.

OF PLANTS.

A *Monœcious Plant* bears *Male* and *Female* flowers distinct on different parts of the same plant; as do the *Hazel*.

A *Diœcious plant* bears only *Males* on one plant, and *Females* on another of the same species; as do the *Sweet Willow*.

A *Polýgamous Plant* produces *Males* and *Hermaphrodites*, or *Females* and *Hermaphrodites* on the same plant, or on distinct ones; as do the *Maple* and *Ash*,

OF LEAVES.

- A *Ciliated Leaf* has its margins furnished with long hairs in the same manner as an eye-lash; as in *Draba Alpina*.
- A *Déntated Leaf* has its margins cut into teeth, which stand at small distances from each other; as in the *Corn Bottle*.
- A *Serrated Leaf* has its margins cut into teeth, touching each other at their base, and their tips all pointing one way; as in the *Briar*.
- A *Crénated Leaf* has its margins cut into teeth, pointing to neither of the extremities; as in *London-Pride*.
- A *Sinuuated Leaf* has its margins coarsely scalloped; as in *Verbascum Blattaria*.
- A *Winged Leaf* is composed of several small leaves, or lobes, ranged on a common footstalk; as in the *Rose*.
- A *Doubly-winged Leaf* has its common footstalk branched out on its sides into winged leaves; as in the *Sensitive Plant*.
- A *Decompounded Leaf* is more than doubly winged; as *Anemone Coronaria*.
- A *Hand-shaped Leaf* has a broadish middle, and its margin cut into spreading segments; as in *Palma Christi*.
- A *Fingered Leaf* is composed of several lobes fastened to the end of a common footstalk; as in the *Hemp*.
- A *Foot-shaped Leaf* has its footstalk divided at the end, and each division supports 2 or 3 lobes; as in *Bearsfoot*.
- A *Stipula* is a small leaf or scale, stationed on each side the footstalks of the leaves and peduncle of a flower; as in the *Pea*.
- An *Arista* is a sharp point issuing from a leaf, or some other part of the plant; as in the Glumes of the *Grasses*.

A
C O M P E N D I U M
OF THE
SEXUAL SYSTEM.

CONTAINING ALL THE GENERA DESCRIBED IN
THE FOLLOWING DICTIONARY, WITH THEIR
CONTRACTED CHARACTERS.

N. B. *Linnæus* progressively establishes his first ten Classes on the Number of the Stamina only, or rather on the Number of the Summits contained in the Flower; and the different Orders of most of the Classes on the Number of the Styles; or if the Styles be wanting on the Number of the Stigmas; he considering the Summits and Stigmas as the essential parts of a Flower. But the Genera are composed of all the parts of Fruetification taken together; and from the different shapes, and dispositions of these parts, the various Genera are formed. Each Genus comprises as many Plants as are found to agree with each other in the parts of fruetification; they all, therefore, bear the same Surname, though they are distinguished the one from the other by Trivial or individual names; just in the same manner as the Children of the same family are known by their different Christian names. These Generic and Trivial names are of excellent use either in writing or discoursing on Botanical subjects; and, when well chosen, they almost amount to a description of the Plant. For instance: *Fragaria vesca* *,

* The Strawberry.

(from *fragrans*, fragrant, and *vescus*, eatable) directly intimate, that some part of the Plant, the fruit in this, have a fragrant smell, and are eatable. But the full meaning of the Generic and Trivial names, is rarely to be expressed by two English words, and consequently they must remain in the Latin. By practice this will not prove inconvenient, but beneficial, as they will be found to impress the memory more strongly than English words would do. As Plants of the same, and even of different Genera, frequently bear a great affinity to each other, the young Botanist should never receive any Plant upon trust, but he must bring it to the test himself by the following Rules of the Science, otherwise he will be often led into error.

NAMES OF THE CLASSES.

- 1 Monándria
- 2 Diándria
- 3 Triándria
- 4 Tetrándria
- 5 Pentándria
- 6 Hexándria
- 7 Heptándria
- 8 Octándria
- 9 Enneándria
- 10 Decándria
- 11 Dodecándria
- 12 Icosándria
- 13 Polyándria
- 14 Didynámia
- 15 Tetradynámia
- 16 Monadélphia
- 17 Diadélphia
- 18 Polyadélphia
- 19 Syngenéfia
- 20 Gynándria
- 21 Monoécia
- 22 Dioécia
- 23 Cryptogámia

THE CLASSES AND ORDERS EXPLAINED.

Class I.

M O N A N D R I A.

The Flowers of this Class are *Herma-phrodite*, and contain only *one* Stamen.

ORDER I. *Termed* MONOGÝNIA.

This comprehends such Flowers as have but ONE Style ; as in

Canna. Calyx of 3 coloured leaves. Corolla 6-parted. Nectarium of 2 petal-like segments ; the lower one revolute.

ORDER II. *Termed* DIGÝNIA.

This comprehends such Flowers as have TWO Styles ; as in

Blitum. Calyx 3-parted. Corolla none. Seed 1, globular, enwrapped by the calyx.

Class II.

D I A N D R I A.

The Flowers in this Class are *Herma-phrodite*, and contain *two* Stamina.

ORDER I. *Termed* MONOGÝNIA.

This comprehends such Flowers as have but ONE Style ; as in

Jasminum. Calyx 5-parted. Corolla 5-parted. Summits within the tube of the corolla. Berry 2-celled. Seeds 2, covered with a loose coat.

- Nyctánthes.* Calyx 8-parted. Corolla 8-parted.
Seed-vessel 2-seeded. Seeds large, roundish.
- Ligústrum.* Calyx 4-parted. Corolla 4-parted, below the germen. Berry 4-seeded. Seeds angular.
- Phyllýrea.* Calyx 4-toothed. Corolla 4-parted.
Berry 1-seeded. Seed large, globular.
- Chionánthus.* Calyx 4-parted. Corolla 4-parted; segments long, and very narrow. Plum roundish.
- Syrínga.* Calyx 4-toothed. Corolla 4-parted.
Seed-vessel compressed, 2-celled. Seeds oblong, compressed.
- Verónica.* Calyx 4-parted. Corolla 4-parted, the lowest segment the narrowest. Seed-vessel 2-celled.
- Verbéna.* Calyx 5-parted; one of the parts stumped. Corolla funnel-shaped, curved, 5-parted, parts nearly equal. Stamina 2 or 4. Seeds 2 or 4.
- Monárda.* Calyx 5-toothed. Corolla lipped, unequal; upper lip linear, and involve the stamina. Seeds 4.
- Sálvia.* Calyx lipped. Corolla lipped, unequal. Stamina forked below, the 2 inner prongs united. Seeds 4.
- Collinsónia.* Corolla lipped, unequal; lower lip cut into many fine parts. Only 1 perfect seed.
- Valeriana.* (See the next Class.)

Clafs III.

T R I A N D R I A.

The Flowers of this Clafs are *Herma-phrodite*, and contain *three* Stamina.

ORDER I. *Termed* MONOGÝNIA.

This comprehends fuch Flowers as have but ONE Style ; as in

Valeriána. Calyx none. Corolla 1 petal, having the bafe gibbous before. Germen below the corolla. Seed 1.

Cneórum. Calyx 3-toothed. Petals 3. Stigma trifid. Berry dry, 3-lobed, 3-seeded. Seeds round.

Crocus. Calyx none. Corolla 6-parted ; parts equal. Stigmas 3, thickeft, convolute, and ferrated at their tip.

I'xia. Corolla of 1 petal, having a ftraight, thread-shaped tube. Limb bell-shaped, 6-parted. Stigmas 3, fimple.

Gladíolus. Calyx none. Corolla gaping, 6-parted. Stamina afcending. Germen below the corolla.

Antholýza. Corolla tubular, irregular, recurved. Germen below the corolla.

Iris. Corolla of 6 petals, alternately fpreading. Stigma trifid, petal-like. Germen below the corolla.

Wachendórfia. Corolla of 6 unequal petals, below the germen. Seed-veffel 3-celled.

Cammelína. Petals 6. Neftariums 3, refemble ftamina, and are inferted into the proper ftamina. Germen within the corolla.

ORDER II. *Termed DIGÝNIA.*

This comprehends such Flowers as have two Styles; as in Phálaris. Calyx of 2 keeled valves of equal length, including a bivalved corolla.

Class IV.

T E T R A N D R I A.

The Flowers of this Class are *Herma-phrodite*, and contain four Stamina of equal length*.

ORDER. I. *Termed MONOGÝNIA.*

This comprehends such Flowers as have but ONE Style; as in

† *Globulária.* Common Calyx imbricated. Corolla lipped; the upper lip bifid, the lower one, trifid. Receptacle chaffy.

Scabiósa. Common Calyx of many leaves. Partial calyx double, and above the corolla. Receptacle naked, or chaffy.

Cephalánthus. Common Calyx none. Partial calyx of 1 funnel-shaped leaf. Receptacle globular, naked. Seed 1, woolly.

Knáutia. Common Calyx oblong, simple. Corolla irregular. Receptacle naked. Seed hairy at the tip.

I'xora. Corolla of 1 oblong, funnel-shaped petal, above the germen. Stamina above the throat of the corolla. Berry 2-seeded.

Cornus. Calyx 4-toothed, deciduous. Petals 4, above the germen. Nut 2-celled. Seeds 2.

* The Flowers of Class XIV. have also four stamina, but two of them are shorter than the rest.

† The first four Genera have aggregate Flowers.

Ptélea. Calyx 4-parted. Petals 4. Germen with-
in the corolla. Fruit roundish, membranous,
2-felled. Seed 1, in the center.

Elæágnus. Calyx (or Corolla) bell-shaped, above
the germen. Fruit a plum. Nut oblong.

Alchemilla. Calyx 8-parted. Corolla none. Seed 1.

Euonymus. (See Clafs V.)

Hippophée. (See Clafs XXII.)

Myrica. (See Clafs XXII.)

ORDER II. Termed DIGÝNIA.

This comprehends such Flowers as have two Styles; as in

Hamamélis. Involucrum 3-leaved. Proper Ca-
lyx 4-leaved. Petals 4. Nut 2-horned, 2-celled.

Hypécoum. Calyx 2-leaved. Corolla of 4 Petals,
the outer 2 the broadest, and trifid. Pod long,
incurved.

ORDER III. Termed TETRAGÝNIA.

This comprehends such Flowers as have four Styles; as in

Ilex. Calyx 4-toothed. Corolla wheel-shaped.
Style none. Berry 4-seeded.

Clafs V.

P E N T A N D R I A.

The Flowers of this Clafs are *Herma-
phrodite*, and contain *five* detached
Stamina*.

ORDER I. Termed MONOGÝNIA.

This comprehends such Flowers as have but ONE Style.

* The Florets in Clafs XIX. contain five Stamina, but they are united.

† GERMEN *above the Corolla.*

- Heliotrópium.* Corolla falver-shaped, 5-parted. Summits in the tube of the corolla, and form an arch with their tips. Mouth naked.
- Cynoglóssum.* Calyx 5-parted. Corolla funnel-shaped. Throat shut. Seeds 4, fixed to the style by their inner angle, and are covered with loose, rough coats.
- Pulmonária.* Calyx 5-toothed, 5-cornered. Corolla funnel-shaped. Throat open. Seeds 4, roundish.
- Cerínthe.* Limb of the corolla tubular and bellying. Throat open. Seeds 2, 2-celled, within the calyx.
- Nolána.* Corolla bell-shaped. Germina 5, with 1 style between them. Seeds 5, 2-celled, lodged in the calyx.
- Prímula.* Corolla funnel-shaped. Throat open. Stigma globular. Seed-vessel 1-celled.
- Soldanélla.* Corolla faucer-shaped, torn into about 30 segments. Seed-vessel 1-celled; tip many-toothed.
- Cortúsa.* Corolla wheel-shaped, with an elevated ring at its throat. Seed-vessel oval, 1-celled; tip 5-valved.
- Cýclamen.* Corolla wheel-shaped, reflexed, tube very short. Throat prominent. Stamina within the tube. Berry globular.
- Dodecátheon.* Corolla wheel-shaped, reflexed. Stamina on the neck of the tube. Seed-vessel oblong, 1-celled.

† When the Learner is about to examine any Flower in this and the following Class, he should first observe whether the Germen be within, or below the corolla, as this will the sooner lead him to the Genus his plant belongs to.

- Lyfimáchia.* Corolla wheel-shaped. Seed-vessel globular, pointed, 1-celled, 10-valved.
- Spigélia.* Corolla funnel shaped. Seed-vessel double, each part 2-celled. Seeds many.
- Azálea.* Corolla bell, or funnel-shaped. Stamina inserted into the receptacle. Seed-vessel 5-celled.
- Plumbágo.* Corolla funnel-shaped. Germen included in a 5-valved nectarium bearing the stamina. Stigma 5-parted. Seed 1, oblong.
- Phlox.* Corolla falver-shaped. Stamina unequal. Stigma 3-parted. Seed-vessel 3-cornered, 3-celled, 1 seed in each cell.
- Convólulus.* Corolla bell-shaped, plaited. Stigmas 2. Seed-vessel 2-celled. Seeds 2 in each cell.
- Ipomæa.* Corolla funnel-shaped. Stigma knob-like. Seed-vessel 3-celled.
- Polemónium.* Corolla wheel-shaped, 5-parted. Tube closed by 5 valves, bearing the stamina. Stigma 3-parted. Seed-vessel 3-celled.
- Mirábilis.* Corolla funnel-shaped, joined to the top of the nectarium. Nectarium globular, and includes the germen.
- Verbáscum.* Corolla wheel-shaped, somewhat unequal. Seed-vessel 1-celled, 2-valved.
- Datúra.* Calyx tubular, angulated, deciduous to near the base. Corolla funnel-shaped, plaited. Seed-vessel 4-valved.
- Hyoscýamus.* Corolla funnel-shaped, obtuse. Stamina inclining. Seed-vessel 2-celled, covered with a lid.
- Nicotiána.* Corolla funnel-shaped, plaited. Stamina inclining. Seed-vessel 2-celled, 2-valved.
- Átropa.* Corolla bell-shaped. Stamina distant, incurved. Berry globular, 2-celled.

- Phýsalis.* Corolla wheel-shaped. Stamina closing. Berry 2-celled, included in a large, inflated calyx.
- Solánum.* Corolla wheel-shaped. Summits close together, and each has two holes at its tip. Berry 2-celled.
- Cápsicum.* Corolla wheel-shaped. Berry dry.
- Chirónia.* Corolla wheel-shaped. Style declining. Stamina placed on the tube of the corolla. Summits twisted when old.
- Lýcium.* Corolla funnel-shaped. Stamina woolly at their base, and close the tube with their wool. Berry oblongish, 2-celled.
- Brunsfélsia.* Corolla funnel-shaped, very long. Berry 1-celled. Seeds many.
- Rhamnus.* Corolla none. Calyx 4 or 5-parted, with a scale at each division, guarding the stamina. Fruit a Berry.
- Ceanóthus.* Petals 5, arched so as to form a bag. Berry dry, 3-celled, one seed in each cell.
- Celástrus.* Petals 5, spreading. Seed-vessel 3-cornered, 3-celled. Seeds few, covered with a hood.
- Euónymus.* Petals 5, spreading. Seed-vessel 5-cornered, 5-celled, coloured. Seeds covered with a hood.
- Diósma.* Petals 5. Nectarium 5-parted crown, placed upon the germen. Seed-vessels 3 or 5, united. Seeds covered with a hood.
- Itea.* Petals five, long, inserted into the calyx. Seed-vessel 1-celled, crowned with the style.
- Celósia.* Calyx of two leaves. Petals 5. Germen surrounded by a five-pointed, plaited nectarium, bearing the stamina.
- Illécebrum.* Calyx of 5 cartilaginous leaves. Corolla

none. Stigma simple. Seed-vessel 5-valved.
Seed 1.

Vinca. Corolla salver-shaped. Seed-vessels 2 erect, oblong bags. Seeds naked.

Nerium. Corolla funnel-shaped, tube crowned with a 5-parted, lacerated nectarium. Seeds feathered.

Pluméria. Corolla funnel-shaped. Seed-vessels 2 oblong, reflexed bags, having the seeds fixed to their insides.

* * GERMEN below the Corolla.

Campánula. Corolla bell-shaped, cut into 5 segments, and has the bottom closed by 5 scales bearing the stamina. Stigma trifid.

Trachelium. Corolla funnel-shaped. Stigma globular. Seed-vessel 3-celled.

Lonicéra. Corolla of one irregular petal. Stigma knob-like. Berry 2-celled. Seeds many.

Cofféa. Corolla salver-shaped. Stamina placed above the tube. Berry 1 or 2-seeded. Seed covered with a loose coat.

Phyllica. Corolla none. Calyx top-shaped, mouth woolly, 5-parted, with a scale at each division, guarding the Stamina. Seed-vessel 3-lobed.

Hédera. Corolla of 5 oblong petals. Berry 5-seeded, girt round with the calyx.

Amaranthus. (See Class XXI.)

Salix. (See Class XXII.)

Viburnum. (See Order III.)

ORDER II. Termed DIGYNIA.

This comprehends such Flowers as have two Styles; as in

Periploca. Corolla star-like. Nectarium a folded

rim placed round the center of the corolla, and having 5 threads longer than the stamina.

Cynánchum. Corolla cut into 5 long segments. Nectarium a cylindrical, 5-toothed tube, as long as the corolla.

Apócynum. Corolla bell-shaped. Nectariums 5 oval, prominent glands surrounding the germina.

Asclépias. Corolla cut into 5 reflexed segments. Nectariums 5, ear-shaped, and mostly put forth a small inflexed horn from their center.

Stapélia. Corolla wheel-shaped, deeply cut into 5 segments. Nectariums 2 stars, placed round a stump in the center.

Gomphréna. Calyx of 2 keeled, coloured leaves. Petals 5, rough, hairy. Nectarium cylindrical, 5-toothed. Style semibifid. Seed-vessel 1-seeded.

Gentiána. Corolla of 1 tubular petal. Seed-vessel 2-valved, 1-celled. Receptacles 2, fastened longitudinally to each valve.

Eryngium. Florets collected into a head, on a chaffy Receptacle.

Astrántia. Flowers in umbels. Leaves of the partial involucre equal, coloured, and longer than the rays. Florets at the edge abortive. Seeds rough.

Bubon. Flowers in umbels. Common involucre of 5 leaves. Fruit egg-shaped, streaked and hairy.

ORDER III. *Termed TRIGÝNIA*

This comprehends such Flowers as have THREE Styles; as in

Rhus. Calyx 5-parted. Petals 5. Germen above the calyx. Berry roundish, 1-seeded.

Vibúrnum. Calyx 5-parted. Corolla 5-parted,

Germen below the corolla. Berry roundish, 1-seeded.

Cassine. Calyx 5-parted. Petals 5. Germen above the calyx. Berry roundish 3-seeded.

Sambucus. Calyx 5-parted. Corolla 5-parted. Germen below the calyx. Berry roundish, 3-seeded

Staphylæa. Calyx 5-parted. Petals 5. Seed-vessels inflated, united. Seeds 2, globular, and marked with a scar.

Tamarix. Calyx 5-parted. Petals 5. Stamina 5 or 10. Seed-vessel 1-celled, 3-valved. Seeds downy.

ORDER V. *Termed* PENTAGÝNIA.

This comprehends such Flowers as have FIVE Styles; as in

Státice. Calyx of one funnel-shaped entire, plaited, parched leaf. Petals 5. Seed 1, within the calyx.

Linum. Calyx 5-parted. Petals 5. Seed-vessel 10-celled. Seeds solitary.

Cráffula. Calyx 5-parted. Corolla 5-parted. Nectariums 5 notched scales, 1 at the base of each germen. Seed-vessels 5, oblong 1 pointed.

Class VI.

H E X A N D R I A.

The Flowers of this Class are *Hermaphrodite* and have *six* detached Stamina of equal length *.

ORDER I. Termed *MONOGÝNIA*.

This comprehends such Flowers as have but ONE Style.

* *GERMEN, above the Corolla.*

Lachenália. Calyx of 3 coloured, petal-like leaves.
Corolla of 3 petals, inserted into the calyx.

Tradescántia. Calyx of 3 leaves. Petals 3. Stamina hairy, inserted into the calyx.

Tulbágia. Calyx none. Corolla funnel-shaped, with a 6-parted limb. Nectarium 3 bifid leaves, crowning the tube, and as large as the limb.

Crinum. Calyx none. Corolla funnel-shaped, cut into 6 segments, and every other segment hooked. Stamina distant.

Bulbocódium. Calyx none. Corolla funnel-shaped; petals 6, with narrow heels, bearing the stamina.

Allium. Calyx none. Corolla spreading, 6-parted. Many flowers from a sheath, forming a confused umbel.

Lílium. Calyx none. Corolla bell-shaped; petals 6, having a lineargland running longitudinally along the inside their base.

Fritillária. Calyx none. Corolla bell-shaped; pe-

* The fourth Class has also six Stamina, but two of them are shorter than the rest. See Class VII.

tals 6, each having a hollowed gland at its base. Stamina as long as the corolla.

Gloriôsa. Calyx none. Corolla of 6^{*} undulated, reflexed petals. Style oblique. Seed-vessel pellucid.

Erythrônium. Calyx none. Corolla bell-shaped; petals 6. Two small tubercles at the base of every other petal.

Tulípa. Calyx none. Corolla bell-shaped; petals 6. Style none. Stigma 3-lobed.

Ornithógalum. Calyx none. petals 6, abiding, erect near their base, spreading above. Stamina dilated at their base.

Scilla. Calyx none. Petals 6, spreading, deciduous. Stamina thread-like.

Asphódelus. Calyx none. Corolla 6-parted. Nectarium 6 valves or scales, covering the germen.

Anthéricum. Calyx none. Corolla of 6 spreading petals. Germen naked. Seed-vessel egg-shaped.

Convallária. Calyx none. Corolla 6-parted. Berry spotted, 3-celled.

Polyánthes. Calyx none. Corolla funnel-shaped, incurved, 6-parted. Stamina inserted into the throat.

Hyacínthus. Calyx none. Corolla funnel-shaped. Three melliferous pores* on the tip of the germen.

Alétris. Calyx none. Corolla funnel-shaped, 6-parted. Stamina inserted into the base of the petals. Seed-vessel 3-celled.

Yucca. Calyx none. Corolla bell-shaped, spreading. Style none. Seed-vessel 3-celled.

* I have mentioned this in conformity to Linæus, but I could never discover the pores, nor any material difference betwixt this genus, and that of *Scilla*.

A'loe. Calyx none. Corolla erect, with a spreading mouth. Stamina inserted into the receptacle.

Hemerocállis. Calyx none. Corolla bell-shaped, with a cylindrical tube. Stamina declining.

Prinos. Calyx 6-parted. Corolla of 1 wheel-shaped petal. Berry 6-seeded.

Bérberis. Calyx of 6 leaves. Petals 6, having 2 glands at their heels. Style none. Berry 2-seeded.

* * G E R M E N *below the Corolla.*

Hæmáanthus. Involucrum of 6 leaves, surrounding many flowers. Corolla 6-parted. Berry 3-seeded.

Galánthus. Calyx none. Petals 3, concave. Nectarium of 3 short, notched, petal-like leaves. Stigma simple.

Leucójum. Calyx none. Corolla bell-shaped, 6-parted, the segments thick at their tips. Stigma simple.

Narcíffus. Calyx none. Petals 6, equal. Nectarium of 1 funnel-shaped leaf, containing the Stamina.

Amarýllis. Calyx none. Corolla bell-shaped; petals 6. Stamina unequal. Stigma trifid.

Pancrátium. Calyx none. Petals 6. Nectarium 12-parted. Stamina on the brim of the nectarium.

Alstræméria. Calyx none. Petals 6, imperfectly forming 2 lips. The 2 lower petals tubular at their base. Stamina declining.

Canarína. Calyx of 6 leaves. Corolla bell-shaped, 6-parted. Stigmas 6. Seed-vessel 6-celled. Seeds many.

ORDER II. *Termed DIGÝNIA.*

This comprehends such Flowers as have two Styles ; as in Airapháxis. Calyx of 2 leaves. Corolla of 2 jagged petals. Stigmas knob-like. Seed one..

Fálkia. Calyx 5-parted. Corolla bell-shaped, 5-parted. Stigmas knob-like. Seeds 4, in the calyx.

ORDER III. *Termed TRIGÝNIA.*

This comprehends such Flowers as have THREE Styles ; as in Tríllium. Calyx of 3 leaves. Corolla of 3 petals. Berry of 3 cells.

Cólchicum. Corolla 6-parted; tube long, and inserted into the root. Seed-vessels 3, united, inflated.

Class VII.

H E P T A N D R I A.

The Flowers of this Class are *Hermaphrodite*, and contain *seven* detached Stamina.

ORDER I. *Termed MONOGÝNIA.*

This comprehends such Flowers as have but ONE Style ; as in

Æ'sculus. Calyx bellying, 5-toothed. Petals 5, unequal, inserted into the calyx. Seed-vessel 3-celled.

Polygonum. (See the next Class.)

Class VIII.

OCTANDRIA.

The Flowers of this Class are *Herma-phrodite*, and contain *eight* detached Stamina.

ORDER I. Termed *MONOGÝNIA*.

This comprehends such Flowers as have but ONE Style; as in Tropæolum. Calyx of 1 coloured leaf, ending in a spur. Petals 5, unequal. Berry dry, 3-lobed.

Ænothëra. Calyx 4-parted. Petals 4, flat. Seed-vessel cylindrical, below the corolla. Seeds naked.

Gaura. Calyx tubular, 4-parted. Petals 4, ascending. Fruit 1-seeded, 4-cornered, below the calyx.

Epilóbium. Calyx 4-parted. Petals 4. Seed-vessel oblong, below the corolla. Seeds downy.

Erica. Calyx of 4 leaves. Corolla 4-parted. Stamina inserted into the receptacle. Summits bifid. Seed-vessel 4-celled.

Daphne. Calyx none. Corolla 4-parted, includes the stamina, and withers by degrees. Berry 1-seeded.

Populus. (See Class XXII.)

Æsculus. (See Class VII.)

Cotyledon. (See Class X.)

ORDER III. Termed *TRIGÝNIA*.

This comprehends such Flowers as have THREE Styles; as in

Polygonum. Calyx none. Corolla 5-parted, serves as a Calyx. Seed 1, angulated, in the Corolla.

Sapindus. Calyx of 4 leaves. Petals 4. Seed-vessels 3, fleshy, bellying, united.

Class IX.

E N N E A N D R I A.

The Flowers of this Class are *Herma-phrodite*, and contain *nine* detached Stamina.

ORDER I. Termed *MONOGÝNIA*.

This comprehends such Flowers as have but ONE Style; as in

Laurus. Calyx none. Corolla 6-parted. Nectarium 3 glands surrounding the germen, and each terminated by two bristles. Plum 1-seeded.

Tinus. Calyx 5-parted. Corolla 5-parted. Nectarium pitcher-shaped, and includes the germen.

ORDER II. Termed *TRIGÝNIA*.

This comprehends such Flowers as have THREE Styles; as in

Rheum. Calyx none. Corolla abiding, 6-parted. Seed 1, three cornered.

Class X.

D E C A N D R I A.

The Flowers of this Class are *Herma-phrodite*, and contain *ten* detached Stamina.

ORDER I. Termed *MONOGÝNIA*.

This comprehends such Flowers as have but ONE Style; as in

Sophóra. Calyx 5-toothed, the upper part gibbous.

Corolla Butterfly-shaped, with the wings as long as the standard. Seed-vessel a pod.

Anagýris. Calyx bell-shaped, 5-toothed. Corolla Butterfly-shaped, with the wings and standard shorter than the heel. Seed-vessel a pod.

Cercis. Calyx 5-toothed, the lower part gibbous. Corolla butterfly-shaped, with the standard shorter and under the wings. Seed-vessel a pod.

Cassia. Calyx of 5 leaves. Petals 5. The 3 uppermost summits barren; the 3 lower ones terminated by a beak. Seed-vessel a pod.

Diſtámnus. Calyx of 5 leaves. Petals 5, spreading. Stamina studded with glands. Seed-vessels 5, united.

Zygophýllum. Calyx of 5 leaves. Petals 5. Nectarium 10 leaves, covering the germen. Seed-vessel 5-celled.

Kálmia. Calyx 5-parted. Corolla salver-shaped, with 5 prominent tubercles on the outside the limb. Seed-vessel 5-celled.

Rhododéndron. Calyx 5-parted. Corolla somewhat funnel-shaped. Stamina declining. Seed-vessel 5-celled.

Andrómeda. Calyx 5-parted. Corolla bell or egg-shaped, with a 5-parted mouth. Seed-vessel 5-celled.

Epigæa. Calyx double. The exteriors 3-leaved; the interior 5-parted. Corolla salver-shaped. Seed-vessel 5-celled.

Arbutus. Calyx 5-parted. Corolla egg-shaped, 5-parted, pellucid downward. Berry 5-celled.

Clethra. Calyx 5-parted. Petals 5. Stigma trifid. Seed-vessel 3-celled, 3-valved.

ORDER II. *Termed DIGYNIA.*

This comprehends such Flowers as have TWO Styles; as in

Royéna. Calyx pitcher-shaped. Corolla of 1 petal, with a revolute limb. Seed-vessel 1-celled, 4-valved.

Saxifraga. Calyx 5-parted. Corolla of 5 petals. Seed-vessels 2, ending in a beak, and 1-celled. Seeds many.

Gypsóphila. Calyx of 1 bell-shaped, angular leaf. Petals 5, oval, sessile. Seed-vessel globular, 1-celled.

Saponária. Calyx of 1 naked leaf. Petals 4, long-heeled. Seed-vessel oblong, 1-celled.

Diánthus. Calyx of 1 cylindrical leaf, having 4 scales at its base. Petals 5, long-heeled. Seed-vessel cylindrical, 1-celled.

ORDER III. *Termed TRIGÝNIA.*

This comprehends such Flowers as have THREE Styles; as in

Silène. Calyx bellying. Petals 5, long-heeled, crowned with 2 teeth at the base of their limb. Seed-vessel 3-celled.

Banistéria. Calyx a 5-parted leaf, having porous glands at its base. Petals 5, roundish, with linear heels. Seed-vessels, 3 winged.

Tamarix. (See Class V.)

ORDER IV. *Termed PENTAGÝNIA.*

This comprehends such Flowers as have FIVE Styles; as in

Cotylédon. Calyx 5-parted. Corolla 5-parted. Nectariums 5 scales at the base of the germina. Seed-vessels 5.

Sedum. Calyx 5-parted. Petals 5. Nectariums 5 scales at the base of the germina. Seed-vessels 5.

Oxális. Calyx of 5 leaves. Petals 5, connected

by their heels. Seed-vessel 5-cornered, and opens at the corners.

Agrostemma. Calyx of 1 tough leaf. Petals 5, long-heeled. Limb obtuse, entire. Seed-vessel 1-celled.

Lychnis. Calyx of 1 oblong, smooth leaf. Corolla of 5 long-heeled petals, having somewhat bifid limbs. Seed-vessel 5-celled.

Cerastium. Calyx of 5 leaves. Petals 5, bifid. Seed-vessel 1-celled, and opens at the tip.

Geranium. (See Class XVI.)

Coriaria. (See Class XXII.)

Class XI.

DODECANDRIA.

The Flowers of this Class are *Hermaphrodite*, and contain from *twelve* to *nineteen* detached Stamina.*

ORDER I. Termed MONOGÝNIA.

This comprehends such Flowers as have but ONE Style; as in

Styrax. Calyx 5-toothed, below the germen. Corolla funnel-shaped. Plum roundish, 2-seeded.

Lythrum. Calyx 12-parted. Petals 6, inserted into the calyx. Seed-vessel 2-celled. Seeds many.

Boccónia. Calyx 2 leaved. Corolla none. Style bifid. Fruit pulpy. Seed 1.

ORDER III. Termed TRIGÝNIA.

This comprehends such Flowers as have THREE Styles; as in

Reseda. Calyx many-parted. Corolla many-parted. Seed-vessel 1-celled. Mouth gaping.

* This Class might be expunged, and the Genera placed in the Polyandria.

Euphórbia. Calyx of 1 bellying leaf. Petals 4 or 5, sitting on the calyx. Seed-vessel 3-lobed.

ORDER V. Termed *POLYGÝNIA*.

This comprehends such Flowers as have MANY Styles ; viz. they have more than five ; as in

Sempérvivum. Calyx 12-parted. Petals 12. Seed-vessels 12, each containing many seeds.

Clafs XII.

I C O S A N D R I A.

The Flowers of this Clafs are *Herma-phrodite*, and contain from *thirteen* to *twenty* detached *Stamina*, or more. But the chief Characters of the Clafs are these: the *Calyx* is concave and formed of *one* leaf; the *Corolla* is fastened by its heels' or claws to the *inner* side of the *Calyx*, as are also the *Stamina*.

ORDER I. Termed *MONOGÝNIA*.

This comprehends such Flowers as have but ONE Style ; as in

Cactus. Calyx of 1 imbricated leaf, above the germen. Corolla of numerous petals. Berry 1-celled. Seeds many.

Philadélphus. Calyx 4 or 5-parted, above the germen. Petals 4 or 5. Seed vessel 4 or 5-celled. Seeds many.

Myrtus. Calyx 5-parted, above the germen. Petals 5. Berry 2 or 3-celled. Seeds solitary.

Púnica. Calyx 5-parted, above the germen. Petals 5. Apple many-celled. Seeds many.

Amýgdalus. Calyx 5-parted, below the germen. Petals 5. Stone of the plum porous.

Prúnus. Calyx 5-parted, below the germen. Petals 5. Seam of the nut prominent.

ORDER II. *Termed DIGÝNIA.*

This comprehends such Flowers as have TWO Styles ; as in Cratægus.* Calyx 5-parted. Petals 5. Germen below the corolla. Berry 2-seeded.

ORDER III. *Termed TRIGÝNIA.*

This comprehends such Flowers as have THREE Styles ; as in Sorbus. Calyx 5-parted. Petals 5. Germen below the corolla. Berry 3-seeded. Leaves of the trees winged.

Spiræa. (See the next Order.)

ORDER IV. *Termed PENTAGYNIA.*

This comprehends such Flowers as have FIVE Styles ; as in Méspilus. Calyx 5-parted. Petals 5. Germen below the corolla. Berry 5-seeded.

Mesembryáanthemum. Calyx 5-parted. Petals numerous, linear, united. Seed-vessel fleshy, below the corolla, many-seeded.

Spiræa. Calyx 5-parted. Petals 5. Germen below the corolla. Seed-vessels 5, many-seeded.

* The Genera *Cratægus*, *Sorbus*, and *Méspilus* ought to be included in one, there being no real, or constant difference between them. Some species both of the *Cratægus* and *Sorbus* will produce 3, 4, or 5 Styles, and consequently as many Seeds in their Berries. The winged leaves, indeed, will distinguish the *Sorbus* ; but in a System wholly formed on the parts of the Fruetification, leaves cannot be admitted as generic marks. See these three Genera in the Dictionary.

ORDER V. *POLYGYNIA*.

This comprehends such Flowers as have MANY Styles; as in

Rosa. Calyx pitcher-shaped, 5-parted, with a contracted neck. Fruit 1-celled. Seeds many, hairy, attached to the inside.

Rubus. Calyx 5-parted. Petals 5. Berry composed of many small, single seeded-knobs.

Potentilla. Calyx 10-parted. Petals 5. Seeds roundish, naked, affixed to a dryish receptacle.

Geum. Calyx 10-parted. Petals 5. Seeds numerous, terminated by a jointed arista.

Dryas. Calyx 5, or 8-parted. Petals 5, or 8. Seeds hairy, tailed.

Cómarum. Calyx coloured, 10-parted. Petals 5, smaller than the calyx. Receptacle oval, spongy, and abiding.

Calycánthus. Calyx none. Corolla like a calyx, pitcher-shaped, many parted, the segments straddling. Seeds many, tailed, within the corolla.

Class XIII.

P O L Y A N D R I A.

The Flowers of this Class are *Herma-phrodite*, and contain from *thirteen* to *twenty*, or more, detached Stamina, as in the former Class; but in this the *Calyx*, the *Corolla*, and *Stamina*, are fixed to a Receptacle at the base of the Germen.

ORDER I. *Termed MONOGÝNIA.*

This comprehends such Flowers as have but ONE Style; as in

Cápparis. Calyx of 4 leathery leaves. Petals 4.

Stamina long. Berry 1-celled, pedunculated.

Aëtæa. Calyx of 4 leaves. Corolla of 4 petals.

Berry 1-celled. Seeds semiorbicular.

Chelidónium. Calyx of 2 leaves. Corolla of 4 petals. Pod linear, 1-celled.

Papáver. Calyx of 2 leaves. Petals 4. Seed-vessel 1-celled, with gaping pores under the stigma.

Tilia. Calyx 5-parted. Petals 5. Berry dry, globular, with 5 cells and 5 valves, opening at their base.

Cistus. Calyx of 5 leaves, two of them smaller than the rest. Petals 5. Seed-vessel dry, hollow.

Córchorus. Calyx of 5 deciduous leaves. Petals 5. Seed-vessel many-valved, many-celled.

ORDER II. *Termed DIGÝNIA.*

This comprehends such Flowers as have TWO Styles; as in

Pæonia. Calyx of 5 leaves. Petals 5. Style none, Stigmas 2. Seed-vessel many-seeded.

ORDER III. *Termed TRIGÝNIA.*

This comprehends such Flowers as have THREE Styles; as in

Delphinium. Calyx none. Petals 5. Nectarium bifid, horned behind. Pods 1 to 3.

Aconitum. Calyx none. Petals 5, the upper one arched. Nectariums 2, pedunculated, recurved. Pods 3 to 5.

ORDER V. *Termed PENTAGÝNIA.*

This comprehends such Flowers as have FIVE Styles; as in

Aquilégia. Calyx none. Petals 5. Nectariums 5, horned, between the petals. Seed-vessels 5, distinct.

Nigélla. Calyx none. Petals 5. Nectariums 5, trifid, within the 'corolla. Seed-vessels 5, united.

ORDER VII. *Termed POLYGÝNIA.*

This comprehends such Flowers as have MANY Styles; as in

Magnólia. Calyx of 3 leaves. Petals 9. Seed-vessels imbricated, 2-valved. Seeds pendulous.

Anemóne. Calyx mostly wanting. Petals 6 or 9, ranged in 2 or 3 orders. Seeds many.

Clématis. Calyx none. Petals seldom more than 4. Seeds roundish, and tailed.

Thalíetrum. Calyx none. Petals 4 or 5. Seeds egg-shaped, furrowed, without tails.

Adónis. Calyx of 5 leaves. Petals from 5 to 15, without nectariums. Seeds naked.

Ranúnculus. Calyx of 5 leaves. Petals 5, each having a nectariferous pore at its heel. Seeds naked.

Tróllius. Calyx none. Petals 14, in different rows. Seed-vessels many, egg-shaped, many-seeded.

Helléborus. Calyx none. Petals 5 or more. Nectariums many, scoop-shaped. Seed-vessel many-seeded.

Caltha. Calyx none. Petals 5. Nectariums none. Seed-vessels many-seeded.

Class XIV.

D I D Y N A M I A.

The Flowers of this Class are *Hermaphrodite*, mostly lipped, and contain *four* Stamina, the inner two shorter than the others. They are inserted into the *tube* of the Corolla, and are generally lodged *under* the upper Lip.

ORDER I. *Termed GYMNOSPÉRMI A.*

The Flowers of this ORDER have 4 naked Seeds at the bottom of the Calyx; as in

Teúcrium. Corolla: upper lip none; lower lip 5-lobed; the 2 lower lobes at the base of the Stamina.

Saturéja. Corolla cut into 2 nearly equal lips, the lower one trifid. Stamina distant.

Hissópus. Corolla lipped: lower lip trifid; the middle segment broad and crenated. Stamina distant.

Népeta. Corolla lipped: lower lip one large, crenated lobe. Chaps reflexed. Stamina approaching.

Lavándula. Calyx oval, slightly dentated, propped by a bractea. Corolla bent backward. Stamina in the tube.

Meniha. Corolla 4-parted; the parts nearly equal; the broadest 1-notched. Stamina erect, distant.

Betónica. Calyx aristated. Corolla lipped; upper lip ascending, flattish. Tube cylindrical.

Stachys. Corolla lipped: upper lip arched; sides

of the lower lip reflexed : the middle segment notched.

Marrubium. Calyx salver-shaped, rigid, 10-streaked. Corolla lipped : upper lip 2-parted ; parts linear, straight.

Leonurus. Corolla lipped ; upper lip entire. Summits sprinkled with shining glands.

Phlomis. Calyx angular. Corolla lipped : upper lip compressed, hairy, and lodges on the lower lip.

Moluccella. Calyx bell-shaped, wide, broader than the corolla, and spiny.

Origanum. Calyces collected into a 4-sided, scaly, cone-like spike. Corolla lipped.

Thymus. Calyx cut about half way into 2 lips : throat closed with downy hairs.

Melissa. Calyx dry, angular, upper-lip ascending. Corolla lipped : upper-lip arched, 2-parted ; middle lobe of the lower-lip, heart-shaped.

Dracocéphalon. Corolla lipped : upper lip concave ; throat inflated.

Melittis. Calyx with a tube much wider than the corolla. Corolla lipped : upper lip flat ; lower-lip crenated. Summits cross-shaped.

Scutellaria. Calyx with an entire mouth, which after flowering is shut with a lid.

ORDER II. *Termed* *ANGIOSPÉRMIA.*

The Flowers of this ORDER are succeeded by a dry hollow Seed-vessel, which always splits in some certain manner ; as in

Chelone. Calyx 5-parted. Between the upper stamina is the rudiment of a fifth stamen. Seed-vessel 2-celled.

Antirrhinum. Corolla prominent at the base, where it becomes a nectarium. Seed-vessel 2-celled.

Digitális. Calyx 5-parted. Corolla bell-shaped, bellying, 5-parted. Seed-vessel oval, 2-celled.

Bignónia. Calyx cup-shaped, 5-parted. Chaps of the corolla bell-shaped, 5-parted, bellying beneath. Pod 2-celled. Seeds winged.

Halléria. Calyx 3-parted. Corolla 4-parted. Stamina longer than the corolla. Berry below, 2-celled.

Lántana. Calyx cut into 4 obsolete teeth. Stigma somewhat hooked. Plumb roundish. Nut 2-celled.

Browállia. Calyx 5-toothed. Corolla salver-shaped; mouth closed by the 2 largest summits. Seed-vessel 1-celled.

Barléria. Calyx 4-parted. Corolla funnel-shaped. Seed-vessel 2-valved; valves elastick. Seeds 2.

Vitex. Calyx 5-toothed. Corolla 6-parted. Berry 4-seeded.

Acánthus. Calyx of 2 bifid leaves. Corolla of 1 deflexed, 3-parted lip. Seed vessel 2-celled.

Meliánthus. Calyx of 5 leaves, the lower 1 gibbous. Petals 4; nectarium under the lowest. Seed-vessel 4-celled.

Class XV.

TETRADYNAMIA.

The Flowers of this Class are *Hermaphrodite*, have *six* Stamina, *two* of which are shorter than the rest, stand opposite, and are *bowed* at their base.

The *Calyx* consists of *four* oblongish, concave, deciduous leaves, and the *Corolla* of *four* obtuse petals, forming a *cross*, and having narrow claws or heels.

ORDER I. Termed *SILICULÓSA*.

The Flowers of this ORDER are succeeded by *ROUNDISH*, compressed pods, having prominent tips; as in

Draba. Pod oval-oblong, entire; valves flattish, parallel with the partition. Style none.

Ibéris. Corolla irregular, the 2 outer petals the largest. Pod notched, many-seeded.

**Alyssum*. Some of the Stamina are marked with a tooth at their base. Pod notched.

Clypéola. Pod orbicular, flat, or a little compressed, notched, and deciduous.

Lunária. Calyx: the two outer leaves bag-like at their base. Pod entire, elliptical, flat, pedunculated; valves equal, parallel with the partition.

ORDER II. Termed *SILIQUÓSA*.

The Flowers of this ORDER are succeeded by *LONG*, slender Pods

Dentária. Stigma notched. Pod opens suddenly, and the valves directly roll back. Calyx shut.

* The Genus *Alyssum* and *Clypeola* are too nearly allied to be separated. The teeth in the Stamina of the *Alyssum* are not to be found on all the species; and the Pods are orbicular in some species of both Genera, and often entire. The *Clypeolas*, then, which are only three, ought to be blended with the *Alyssums*. The same may be justly observed of the *Cheiranthus* and *Hesperis*, for in the *Annual Hope* (*Cheiranthus Annuus*) the two short Stamina are not half so long as the rest, and the Stigma of the *Cheiranthus* is not always marked with denticles. The Seeds too of *Cheiranthus Maritimus* have no membrane. See these too Genera in the Dictionary.

Cardamine. Stigma entire. Pod opens suddenly, and the valves directly roll back. Calyx rather open.

Erysimum. Pod linear, and exactly four square. Calyx shut.

Cheiranthus. Calyx shut; the 2 lower leaves gibbous at their base. Germen marked on each side with a denticle. Seeds flat, bordered with a membrane.

Hesperis. Calyx shut. Petals turned obliquely. A small gland between the short stamina. Pod straight. Stigma forked at the base, conniving at the tip.

Class XVI.

MONADELPHIA.

The Flowers of this Class are *Hermaphrodite*, and contain *many* Stamina, all united below into a cylindrical Column, through which passes the Style or Styles. The *Corolla* consists of five reversed heart-shaped Petals. The *Calyx* is permanent, and mostly *double*.

ORDER I. Termed PENTÁNDRIA.

This comprehends such Flowers as have FIVE Stamina; as in Hermánia. Petals 5, oblique, with hood-like, half tubular, nectariferous bases. Styles 5. Seed-vessel 5-celled

ORDER II. Termed DECÁNDRIA.

This comprehends such Flowers as have TEN Stamina; as in Geranium. Style 1. Stigmas 5, reflexed. Seeds 5, oblong, and are terminated by a long, twisted beak.

ORDER III. *Termed POLYÁNDRIA.*

This comprehends such Flowers as have MANY Stamina; as in

Sida. Calyx simple, angular. Style many-parted.

Seed-vessels many, 1 seed in each.

Althæa. Calyx double; the outer 9-parted. Seeds many, placed in a whorl, in distinct, loose coats.

A'lcea. Calyx double; the outer 6-parted. Seeds many, placed in a whorl, in distinct, loose coats.

Malva. Calyx double; the outer 3-leaved. Seeds many, placed in a whorl, in distinct, loose coats.

Lavatéra. Calyx double; the outer 3-parted. Seeds many, placed in a whorl, in distinct, loose coats.

Uréna. Calyx double; the outer 5-parted. Seed-vessel 5-celled, prickly, 1 seed in each cell.

Hibiscus. Calyx double; the outer many leaved. Seed-vessel 5-celled, seed in each numerous.

Class XVII.

D I A D E L P H I A.

The Flowers of this Class are *Hermaphrodite*, and generally contain *ten* Stamina, *nine* of which are united into a kind of Tube, and the *tenth* is detached. The Corolla is *butterfly-shaped*. The seed-vessel is an oblong, compressed *Pod*, having a longitudinal *Seam* on each side.

ORDER I. *Termed HEXÁNDRIA.*

This comprehends such Flowers as have six Stamina; as in Fumária. Calyx 2-leaved. Corolla gaping. Stamina 2, membranous, and each supports 3 summits.

ORDER II. *Termed OCTÁNDRIA.*

This comprehends such Flowers as have EIGHT Stamina; as in

Polygala. Calyx 5-leaved; 2 of them coloured, and serve as wings. Pod reverse heart-shaped, 2-celled.

ORDER III. *Termed ENNEÁNDRIA.*

This comprehends such Flowers as have NINE Stamina; as in Borbónia. Teeth of the calyx terminated by a spine. Stigma notched. Pod sharp pointed.

ORDER IV. *Termed DECÁNDRIA.*

This comprehends such Flowers as have TEN Stamina; as in

* *Spártium. Calyx coloured; upper margin short. Germen hairy. Stigma longitudinally downy.*

* *Genísta. Calyx lipped; upper lip bifid, lower one trifid. Standard oblong, reflexed back from the stamina and style.*

* *Aspálathus. Calyx 5-parted; upper segment the largest. Pod egg-shaped, beardless. Seeds about 2.*

* *Crotalúria. Stamina united, but have a fissure at their back. Pod turgid, inflated, pedunculated.*

* *Onónis. Calyx 5-parted; segments linear. Standard streaked. Pod turgid, sessile.*

N B. Those marked with the Asterism have their Stamina united.

- * *Anthyllis*. Calyx bellying, downy. Pod roundish, covered by the calyx.
- * *Lupinus*. Calyx cut into 2 lips. Five of the summits oblong, and 5 roundish. Pod leathery.
- Ulex*. Calyx 2-leaved. Pod scarce longer than the calyx.
- Clitoria*. Corolla looking upward; the standard large, spreading, and over-shadows the wings.
- Orobis*. Calyx with an obtuse base, a 5-parted brim, the two upper segments the shortest, and deeper divided. Style linear.
- Lathyrus*. Calyx 5-parted; the 2 upper segments the shortest. Style flat, broadest near the end, and hairy on the fore part.
- Cytisus*. Calyx lipped: upper lip bifid; lower one trifid. Pod obtuse, with a slender base.
- Robinia*. Calyx 4-parted; the upper part bifid. Stigma hairy to the tip. Pod gibbous, elongated.
- Colutea*. Calyx 5-parted. Pod broad, inflated, and opens at the upper base.
- Coronilla*. Calyx lipped: upper lip bifid, the teeth close together; lower lip trifid. Standard scarce longer than the wings. Pod contracted between the seeds.
- Hedysarum*. Keel of the corolla transversely obtuse. Pod articulated, 1 seed in each joint.
- Galéga*. Calyx with the teeth awl-shaped, nearly equal. Pod with oblique streaks between the seeds.
- Astrágulus*. Calyx with the teeth decreasing in size to the lowest. Pod gibbous, 2-celled.

Pforália. Calyx longitudinally sprinkled with cal-
lous dots. Pod 1-seeded.

Trifólium. Flowers mostly in heads. Pod scarce
longer than the calyx, not gaping, deciduous.

Lotus. Calyx tubular. Wings of the corolla
longitudinally conniving upward. Pod cy-
lindrical, straight.

Medicágo. Pod compressed, convolute, or rolled
together. Keel of the corolla bent down from
the standard.

Anagyris. (See Class X.)

Cercis. (Ditto.)

Sophora. (Ditto.)

Class XVIII.

P O L Y A D E L H I A.

The Flowers of this Class are *Herma-
phrodite*, and the Stamina are *united* at
their base into distinct parcels, or
bunches.

ORDER III. Termed ICOSÁNDRIA.

*This comprehends such Flowers as have TWENTY Sta-
mina, or more, united in several sets; as in*

Citrus. Calyx 5-parted. Petals 5, oblong.
Stamina about 20, close together in various
parcels. Berry 9-celled.

ORDER IV. Termed POLYÁNDRIA.

*This comprehends such Flowers as have MANY Stamina
in each bunch; as in*

Hypéricum. Calyx 5-parted. Petals 5. Stamina
many, in 5 bunches closely ranged.

Ascyrum. Calyx 4-leaved. Petals 4. Stamina many, digested into 4 parcels.

Class XIX.

SYNGENESIA.

This Class comprehends the *Compound Flowers*, or such as are composed of many sessile Florets, all standing on one common, undivided *Receptacle*, and are male, female, hermaphrodite, or neuter. In such Florets as contain stamens the Summits are *united* into a kind of Cylinder, through which passes the Style. See the definition of a compound Flower.

ORDER I. Termed *POLYGAMIA ÆQUALIS*.

The Florets of the Flowers of this ORDER are ALL Hermaphrodite ; as in

- * *Tragopogon.* Calyx simple. Receptacle naked. Down feathered.
- * *Hieracium.* Calyx egg-shaped, imbricated : scales linear. Receptacle naked. Down simple, sessile.
- * *Crepis.* Calyces 2 ; the scales of the small one deciduous. Receptacle naked. Down-feathered, on a footstalk.
- * *Catananche.* Calyx imbricated. Receptacle chaffy. Seed crowned with a small calyx of 5 bristles.

N. B. Those marked with the Asterism have their Florets all flat.

- * *Scólymus*. Calyx imbricated : scales sharp pointed, Receptacle chaffy. Down none.
- Cárthamus*. Calyx egg-shaped, and imbricated with scales tipped with egg-shaped leaves.
- Cacália*. Calyx cylindrical, oblong, with a kind of small calyx at the base. Receptacle naked. Down like fine hair.
- Agerátum*. Calyx oblong, nearly equal. Florets 4-parted. Receptacle naked. Down supplied by 5 arístæ.
- Chrysócoma*. Calyx hemispherical, imbricated. Style scarce longer than the floret. Receptacle naked. Down simple.
- Santolína*. Calyx hemispherical, imbricated. Receptacle chaffy. Down none.
- Athanásia*. Calyx imbricated. Receptacle chaffy. Down very short, like chaff.

ORDER II. *Termed POLYGÁMIA SUPÉRFLUA.*

The Flowers of this ORDER have the Florets in the disk Hermaphrodite, and those at the edge Female; as in

- Tanacétum*. Calyx imbricated, hemispherical. Rays of the corolla, if any, obsolete, trifid. Receptacle naked. Down supplied by a margin.
- Gnaphálium*. Calyx imbricated; the marginal scales rounded, parched, coloured. Receptacle naked. Down feathered.
- Xeránthemum*. Calyx imbricated with coloured scales, forming the radius. Receptacle chaffy. Down bristly.
- Báccharis*. Calyx imbricated, cylindrical. Female florets mixed with the hermaphrodites, Receptacle naked. Down like fine hair.

- Tussilágo.* Calyx cylindrical: scales equal, as long as the disk, and thin at their edges. Receptacle naked. Down simple.
- Senécio.* Calyx cylindrical, with a small calyx at its base: scales blasted at their tip. Receptacle naked. Down simple.
- Aster.* Calyx imbricated: lower scales spreading. Rays more than 10. Receptacle naked. Down simple.
- Solidágo.* Calyx imbricated with incurved scales. Rays about 5. Receptacle naked. Down simple.
- Cinerária.* Calyx simple: leaves many, equal. Receptacle naked. Down simple.
- Helénium.* Calyx simple, many-parted. Rays deeply cut into 3 parts. Down supplied by 5 aristæ. Receptacle convex, naked in the disk; chaffy at the edge.
- Tágetes.* Calyx simple, 5-toothed. Rays 5, or more, abiding. Receptacle naked. Seeds crowned with 5 erect bristles.
- Zinnia.* Calyx oblong-egg-shaped, imbricated. Rays 5, or more, entire, abiding. Receptacle chaffy. Seeds crowned with 2 erect aristæ.
- Chrysánthemum.* Calyx hemispherical, imbricated; the marginal scales membranous. Receptacle naked. Down none.
- A'nthemis.* Calyx hemispherical, nearly equal. Rays more than 5. Receptacle chaffy. Down none.
- Achilléa.* Calyx egg-shaped, imbricated. Rays about 5, trifid. Receptacle chaffy. Down none.
- Buphthálmum.* Stigmas of the florets in the disk entire. Seeds oblong; top margin obsolete.

Seeds of the rays sharp edged on both sides.
Receptacle chaffy.

ORDER III. *Termed* POLYGÁMIA FRUSTRÁNEA.

The Flowers of this ORDER have the Florets in the disk hermaphrodite, and those at the edge neuter; as in

Heliánthus. Calyx imbricated; scales long, acute and straddling. Receptacle flat, chaffy. Down supplied by 2 deciduous leaves.

Rudbékia. Calyx composed of 2 orders of scales. Receptacle conical, chaffy. Down supplied by 4 obsolete teeth.

Coreópsis. Calyx erect, many-leaved, girt at the base with spreading rays. Receptacle chaffy. Down supplied by 2 horns.

Gortéria. Calyx imbricated; scales like spines. Rays strap-shaped. Receptacle naked. Down like wool.

Centáurea. Florets all tubular; those in the margin the longest, funnel-shaped, and irregular. Receptacle bristly. Down simple.

ORDER IV. *Termed* POLYGÁMIA NECESSÁRIA

The Flowers of this ORDER have the Florets in the disk Male, and those at the edge Female; as in*

Silphium. Calyx imbricated: scales broad, straddling. Receptacle chaffy. Down supplied by two teeth.

Caléndula. Calyx of many equal leaves. Receptacle naked. Down none. Seeds in the disk membranous.

* It must not here be concluded, that these Florets are pure Males, or that they contain only Stamina. On the contrary, they frequently have a Germen, Style, and Stigma; but by some means the Germen generally proves abortive. In determining the Genera, then, of this Order, the barrenness of the Germina in the disk must be attended to, they being mostly mere skins.

Arctótis. Calyx imbricated: scales parched at their tip. Receptacle hairy, or chaffy. Down supplied by a 5-leaved crown.

Othónna. Calyx of 1 almost cylindrical, many-parted leaf. Receptacle naked. Down scarce any.

Eriocéphalus. Calyx of 10 equal leaves. Rays 5. Receptacle somewhat hairy. Down none.

Osteospermum. Calyx many-leaved. Seeds globular, coloured, bony. Receptacle naked. Down none.

ORDER V. Termed *POLYGÁMIA SEGREGÁTA*.

The Flowers of this ORDER have the Florets separated by partial Calyces, each of which supports one or more Florets. The Florets are mostly Hermaphrodite; as in

E'chinops. One hermaphrodite, funnel-shaped floret to a partial calyx. Receptacle bristly. obsolete.

ORDER VI. Termed *MONOGÁMIA*.

The Flowers of this ORDER are quite Simple, but have five united Summits; as in

Lobélia. Calyx 5-parted. Corolla of 1 irregular petal. Seed-vessel 2 or 3-celled, below the corolla.

Viola. Calyx 5-leaved. Petals 5, irregular, horned behind. Seed-vessel 3-valved, 1-celled, above the corolla.

*Impátien*s. Calyx 2-leaved. Petals 5, irregular, partly placed in a hood-like nectarium. Seed-vessel 5-valved, above the Corolla.

Class XX.

G Y N A N D R I A.

The Flowers of this Class have the *Stamina* growing upon the *Style*, or upon a *Body*, or *Receptacle* supporting both *Stamina* and *Style*.

ORDER I. Termed *DIÁNDRIA*.

This comprehends such Flowers as have TWO Stamina; as in Ophrys. Nectarium longer than the petals, somewhat keel-shaped beneath.

Cypripédium. Nectarium slipper-shaped, shorter than the petals.

ORDER II. Termed *TRIÁNDRIA*.

This comprehends such Flowers as have THREE Stamina; as in

Sisyrínchium. Style 1. Sheath 2-leaved. Petals 6, flat. Seed-vessel 3-celled, below the corolla.

ORDER IV. Termed *PENTÁNDRIA*.

This comprehends such Flowers as have FIVE Stamina; as in

Passiflóra. Styles 3. Calyx 5-leaved. Petals 5. Nectarium a triple crown. Berry on a stalk.

ORDER V. Termed *HEXÁNDRIA*.

This comprehends such Flowers as have SIX Stamina; as in

Aristolóchia. Styles 6. Calyx none. Petal 1, tubular; the lower lip tongue-shaped, entire. Seed-vessel 6-celled, below the corolla.

Class XXI.

MONOECIA.

The Flowers of this Class are *not* Hermaphrodite, except in the *last Order*, but they are produced male and female distinct on the *same Plant*.

ORDER III. *Termed TRIÁNDRIA.*

The Male Flowers of this ORDER have THREE Stamina.

Zea. Male flowers in distinct spikes. Calyx a naked, 2-flowered glume. Corolla a naked, 2-valved glume.—Female calyx a 2-valved glume. Corolla a 2-valved glume. Style thread-like, pendulous. Seeds solitary, sunk in an oblong receptacle.

ORDER IV. *Termed TETRÁNDRIA.*

The Male Flowers of this ORDER have FOUR Stamina.

Bétula. Male calyx of 1 trifid leaf, bearing 3 florets. Corolla 4-parted.—Female calyx 2 or 3-parted, and bears 2 florets. Seed on both sides winged with a broad membrane.

ORDER V. *Termed PENTÁNDRIA.*

The Male Flowers of this ORDER have FIVE Stamina.

Amaránthus. Male Calyx 3 or 5 leaved. Corolla none. Stamina 3 or 5.—Female calyx 3 or 5-leaved. Corolla none. Styles 3. Seed-vessel 1-celled. Seed 1.

ORDER VIII. *Termed POLYÁNDRIA.*

The Male Flowers of this ORDER have MANY Stamina.

Quercus. Male calyx mostly 5-parted. Corolla

none. Stamina 5 or 10.—Female calyx of 1 entire, rugged leaf. Corolla none. Styles from 2 to 5. Seed 1, egg-shaped.

Fagus. Male calyx bell-shaped, 5-parted. Corolla none. Stamina about 12.—Female calyx 4-toothed. Corolla none. Styles 3. Seed-vessel rough, rather spiny, 4-valved. Seeds 2.

Plátanus. Male flowers in a globular catkin. Corolla scarce visible. Summits surrounding the stamina.—Female flowers in a globular catkin. Corolla of many petals. Styles many. Stigmas recurved. Seeds roundish, downy at their base, and crowned with the style.

ORDER IX. *Termed MONADÉLPHIA.*

The Male Flowers of this ORDER have ONE set of united Stamina; as in

Pinus. Male calyx 4-leaved. Corolla none. Stamina many. Summits naked.—Female flowers in a cone: the scales 2 flowered. Corolla none. Style 1. Nut enlarged by a membranous wing.

Thuja. Male flowers in a scaly catkin. Corolla none. Stamina 4.—Female flowers in a cone: the scales 2-flowered. Corolla none. Style 1. Nut girt with a notched wing.

Cupréssus. Male flowers in a scaly catkin. Corolla none. Summits 4, sessile.—Female flowers in a cone: the scales 1-flowered. Corolla none. Style a concave dot. Nut angled.

Croton. Male calyx cylindrical, 5-toothed. Petals 5. Stamina 10 or 15.—Female calyx many-leaved. Corolla none. Styles 3, bifid. Seed-vessel 3-celled. Seed 1.

Rícinus. Male calyx 5-parted. Corolla none. Stamina numerous, branching.——Female calyx 3-parted. Corolla none. Styles 3, bifid. Seed-vessel 3-celled. Seed 1.

ORDER X. *Termed SYNGENÉSIA.*

The Male Flowers of this ORDER have their Summits UNITED; as in

Momórdica. Male calyx 5-parted. Corolla 5-parted. Stamina 3.——Female calyx 5-parted. Corolla 5-parted. Style trifid. Fruit opens with an elastic force.

ORDER XI. *Termed POLYGÁMIA SUPÉRFLUA.*

The Flowers of this ORDER are Male and Hermaphrodite, or Female and Hermaphrodite, distinct on the same Plant; as in

Verátrum. Hermaphrodite calyx none. Petals 6. Stamina 6. Styles 3. Seed-vessels 3, many-seeded.——Male calyx none. Petals 6. Stamina 6. Style imperfect.

Mimósa. Hermaphrodite calyx 5-toothed. Corolla 5-parted. Stamina 5, or more. Style 1. Seed-vessel a pod.——Male calyx 5-toothed. Corolla 5-parted. Stamina 5, 10, or more.

Clusia. Male calyx 4, or 6-leaved: leaves opposite, imbricated. Petals 4, or 6. Stamina numerous.——Female calyx and corolla like the male. Nectarium of the summits united, and includes the germen. Seed-vessel 5-celled, 5-valved, and filled with pulp.

Acer. Hermaphrodite calyx 5-parted. Petals 5. Stamina 8. Style 1. Seed-vessels 2 or 3, one-seeded, terminated with a wing.——Male calyx 5-parted. Petals 5. Stamina 8, or more.

Class XXII.

DIOECIA.

The Flowers of this Class are *not* Hermaphrodite, except in the *last Order*, but they are produced Male and Female on *distinct* Plants,

ORDER II. *Termed DIÁNDRIA.*

The Male Flowers of this ORDER have TWO Stamina.

Salix. Male flowers in a scaly catkin. Corolla none, but there is a nectariferous gland in the center.—Female flowers in a scaly catkin. Corolla none. Style 2-parted. Seed-vessel 1-celled, 2-valved. Seeds downy.

ORDER IV. *Termed TETRÁNDRIA.*

The Male Flowers of this ORDER have FOUR Stamina.

Hippophée. Male calyx 2-parted. Corolla none. Female calyx 2-parted. Corolla none. Style 1. Berry 1-seeded.

Mýrica. Male Flowers in a catkin: scales moon-shaped. Corolla none.—Female catkin like the male. Corolla none. Styles 2. Berry 1-seeded.

Anthospérnum *. Male calyx 4-parted. Corolla none.—Female calyx 4-parted. Corolla none. Styles 2. Seed-vessel below the calyx.

ORDER VI. *Termed HEXÁNDRIA.*

The Male Flowers of this ORDER have SIX Stamina; as in

Smilax. Male calyx 6-leaved. Corolla none. —Female calyx 6-leaved. Corolla none. Styles 3. Berry 3-celled. Seeds 2.

* The Plants of this Genus produce no hermaphrodite Flowers. Lin.

ORDER VIII. *Termed OCTÁNDRIA.*

The Male Flowers of this ORDER have EIGHT Stamina.

Pópulus. Male flowers in a catkin: scales lacerated.

Corolla top-shaped, oblique, entire.——Female flowers in the same kind of catkin. Stigma 4-parted. Seed-vessel 2-celled. Seeds downy.

ORDER X. *DECÁNDRIA.*

The Male Flowers of this ORDER have TEN Stamina; as in

Coriária. Male calyx 5-leaved. Petals 5, like the calyx, and connected with it. Summits 2-parted.——Female calyx and corolla like the male. Styles 5. Seeds 5, covered by the succulent petals.

ORDER XII. *Termed POLYÁNDRIA.*

The Male Flowers of this ORDER have MANY Stamina.

Cliffórtia. Male calyx 3-leaved. Corolla none. Stamina about 30.——Female calyx 3-leaved, above the germen. Corolla none. Styles 2. Seed-vessel 2-celled. Seeds 2.

ORDER XIII. *MONADÉLPHIA.*

The Male Flowers of this ORDER have ONE set of united Stamina; as in

Juníperus. Male flowers in a scaly catkin. Corolla none. Stamina 3.——Female calyx 3-parted. Petals 3. Styles 3. Berry 3-seeded, and have 3 tubercles at the tip.

ORDER XIV. *Termed SYNGENÉSIA.*

The Male Flowers of this ORDER have their SUMMITS united; as in

Ruscus. Male calyx 6-leaved. Corolla none. Nectarium central, oval, perforated at the tip.——Female calyx, corolla, and nectarium like the male. Style 1. Berry 3-celled. Seeds 2.

ORDER XVI. *Termed* POLYGÁMIA SUPÉRFLUA

The Flowers of this ORDER are Female and Hermaphrodite on the same or on distinct plants: or they are Male and Hermaphrodite on the same, or on distinct plants. Also, Male, Hermaphrodite, and Female on distinct Plants.

Fráxinus. Hermaphrodite calyx 4-parted, or entirely wanting. Petals 4, or none. Stamina 2. Style 1, Seed 1, lance-shaped.

Gledítzia. Hermaphrodite calyx 4-parted. Petals 4. Stamina 6. Style 1. Seed-vessel a pod.
 —Male calyx 3-leaved. Petals 3. Stamina 6. —Female calyx 5-leaved. Petals 5. Style 1. Seed-vessel a pod.

Class XXIII.

C R Y P T O G A M I A.

The Flowers of this Class, both from their *minuteness* and their *situation*, are for the most part concealed. They are either contained within the *Fruit*, or they are scattered on the *surface* of some part of the Plant.

ORDER I. *Termed* FILÍCES or FERNS.

The Flowers of this ORDER are mostly contained in dots, or lines on the back of the leaf.

Adiántum. Flowers in terminal dots, under the curled margins of the leaves.

Polypódium. Flowers in roundish dots, scattered over the back of the leaf.

